



INDEXA

Helping to Make DX Happen Since 1983

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worldwide peace, and friendship

Laccadive Islands DXpedition—VU7AG By Deepak Pathak, VU2CDP

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DXers know that there are many reasons as to why an entity rises high on the Most-Wanted list, three of these are

- o The entity is hard to reach
- o The political environment isn't conducive for amateur radio
- o Obtaining an operating permit/license is a difficult and often tedious process



Left to right: VU3CHM (Raji, XYL of VU2ABS), VU2ABS (Aravind), VU2CDP (Deepak), VU3DMP (Chetz), VU2PAI (Pai), VU2NXM (Basappa), and VU2NKS (Nandu). Missing, VU2RCT & W4VKU.

For the most part, the first two of these reasons is enough to ensure that the entities that reside in the top 50 list remain pretty much unchanged, except maybe to trade places every once in a while. Those that make it on the list for reason number three certainly merit a hard look and beg the question, "How difficult could it possibly be?" More so, when the entity in question is a popular tourist destination, one cannot help but ask, "Why is this entity still on the Wanted list? And, what's it going to take to knock it off?" Thankfully there aren't many entities that evoke such a reaction from DXers. However, among those that do, there is one which even managed to get as high up as #2 not too long ago.

The Lakshadweep Islands, an archipelago off the south-west coast of India, continue to be an elusive entity on the airwaves, despite being a popular holiday destination. This chain of islands, also known by their more Anglicized name of Laccadives, literally means "a hundred thousand islands" in Sanskrit. While in reality they may be fewer in number, these islands continue to hold the fascination of radio amateurs world-wide, who dream a thousand dreams of having Lakshadweep in their logs. The rarity of Lakshadweep ensures that any amateur radio activity from these islands generates considerable interest in the DX community.

inside...

Meet INDEXA Director Franz Langner, DJ9ZB
RTTY operator's new mantra, "Look, Look, and Look"

Laccadive Islands DXpedition—VU7AG (con'd)

Beginnings

VU7 had crept up on the most-wanted list, especially in North America. A small group comprising VU2CDP/VU3DMP/W4VKU (VU2VKU)/VU2PAI had been discussing the possibility of activating VU7 for a couple years and were getting restless with the government bureaucracy. At this point, Krish W4VKU decided to act on his own. The discussions with the larger group hadn't moved forward very much and there was no definite plan in sight. Knowing fully well that the challenges of obtaining



Laccadive locale.

permission for a group operation from VU7 remained unanswered, Krish decided to go solo. An application was made to the relevant authorities in November 2012 seeking permission to operate for a period of 10 days.

The application process is not exactly straight forward. There are some unwritten rules given the strategic importance of the islands. For starters, the islands lie close to the international maritime boundary of India making them a critical land-mass from a military point of view. Secondly, an entry permit by the local island council is required before one can even set foot on the islands. Entry permits are granted once the purpose of the visit, place of stay and confirmed return journey details are provided. Add to this, an inherent bureaucratic reluctance towards granting transmitting licenses for places of strategic importance means there are more than a few hoops to jump through before getting a signal on the air from VU7. It is fair to mention that all "approving" parties are independent authorities and the decisions of one do not necessarily have a bearing on the decision of the other. This in simple terms means that if the application has to be signed by A, B and C, a "yes" by A needn't necessarily translate into a "yes" from B or C. Though a "no" from any single authority is likely to be respected by the others!

With no permission in sight until March 2013, Krish

teamed up with Pai VU2PAI and decided to head further south to the Maldives instead. 8Q7KP was set to take place in April 2013, when suddenly Krish got news that a brown envelope had been received at his parent's home in Chennai. This envelope contained permission to operate from Lakshadweep, what a great surprise! VU7KV was set to be QRV from 2nd May to 5th May 2013 from Kavaratti, the administrative HQ of Lakshadweep. However the VU7 permission was just too good to waste, so Krish made a quick dash from the Maldives to Chennai and then on to Kavaratti so that he could squeeze in 3 days of VU7 operating time before heading back home to North Carolina in the USA. Reflecting on the VU7KV trip, Krish had this to say: "The pileups were intense, especially on the higher bands clearly indicating that VU7 was a much needed entity on 10 and 12m. There were still many folks out there who needed it for an all time new one. A one-man operation wasn't adequate to wet [sic] this demand and called for a much larger operation. Also the whole application process was a learning experience. We discovered what works and what doesn't and once the paperwork is in order, it is a matter of waiting patiently. Additionally the VU7KV trip was useful in establishing some very useful contacts on the ground, which later proved to be invaluable for the larger operation."

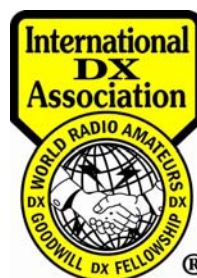
Putting it together

The first order of business for Krish after getting back to North Carolina was to mobilize the team and

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get the paperwork in order. The paperwork was substantial. With fourteen initial members the team was sizeable and each individual had to submit five sets of documents averaging seven pages each. That was one big packet of documents which was sent to the WPC in New Delhi! Deepak VU2CDP, ensured that the documentation was all in order and took up the task of getting the permission using his method of relentless follow-ups. What was initially okayed and “will be approved in the coming days” became a wait that stretched from May until October-end. The logistics, on the other hand, were ably taken care of by Chetan VU3DMP with help from Chandra VU2RCT. Mangalore, the home-town of Chandra, Chetan and Pai, was the staging area, since there were frequent boats that would leave from Mangalore to Lakshadweep. Agatti was chosen as the VU7AG QTH due to the presence of the air-strip in order to aid logistics and help a speedy evacuation in case of a medical emergency.

With a few team-members dropping out due to personal reasons, the final team of nine was – Krish W4VKU (Team leader), Chandra VU2RCT (co-leader), Deepak VU2CDP (co-leader), Chetan VU3DMP, Pai VU2PAI, Basappa VU2NXM, Nandu VU2NKS, Aravind VU2ABS and Raji (VU3CHM, XYL of VU2ABS who was on her first expedition). The permission granted was for the period November 20 till December 10. Krish flew in for a week with over 100kgs of excess baggage making the airline happy, while over 500kgs of equipment was transported by boat to Agatti from Mangalore. Due to an ongoing litigation, the resorts on Agatti were unavailable and therefore a private guest house was selected as the QTH. It was only 50ft from the coast line and turned out to be an excellent choice due to the lagoon and some 20ft of shallow, flat sandy seabed along the waterline for installation of the phased vertical antennas.

About the island

Agatti is one of the 10 inhabited islands in the Lakshadweep chain. It is 5.6kms long and just about 1000mts wide at its broadest point. The islanders are all predominantly Muslim, who speak a variant of Malayalam, a language spoken in the state of Kerala on the Indian mainland. In fact, each of the islands in the Lakshadweep chain has their own variant of the dialect called Jeseri. The VU7AG



The island has over 8,000 inhabitants whose primary occupation is fishing. The Tuna industry is thriving given its abundance in these waters

team itself was pretty diverse hailing from different parts of the country and English was our *lingua franca*. It only got tougher once we set foot in Agatti, having to make do with the islanders little understanding of English and ours of Malayalam, or Jeseri for that matter! Sameer, of Lakshadweep Tours, who arranged our accommodations on Agatti was our man who would play translator all the time.



Fish processing kettle.

It is beyond doubt that Agatti is an idyllic holiday spot. A narrow road runs through the length of the island surrounded on either side by swaying palm trees. The lagoons surrounding Agatti abound in fish

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of various varieties and are a popular fishing destination for tourists. The islanders are a very friendly bunch and are progressive as was evident from the numerous schools on the island. Every day, the team was greeted by the sight of children heading off to school on their bicycles. The merry voices of children and their happy faces made a very pretty sight. Some of us would love to go back there and spend our time lazing in hammocks sipping toddy. (Note: There is a prohibition on alcohol due to the religious way of life for the islanders, but a taste for toddy can certainly be developed. Sweet toddy—palm nectar also called '*neera*'—is extracted daily and available freely. If allowed to ferment for a few hours, it can be used to lift the spirits! HI)



A tree climber handling the coconut flower to extract "Neera".

The operation that almost wasn't!

Entry to the Lakshadweep islands is on the basis of a permit granted by the island council. Without the permit, you are not allowed to check-in at the airport at Kochi (Cochin, on mainland India). The mainland is connected via the national carrier Air India, which flies an ATR-42 aircraft daily to Agatti. It is the only flight and seats are hard to obtain during the holiday season. While transportation for team-members and equipment had all been booked well in advance, the all-important permit was still pending. The clearance from the Navy was in hand, the transmitting license had been granted, but the island council had not acted on the entry request.

Krish had arrived a few days in advance in order to oversee preparations and also conduct a demon-

stration on amateur radio for the local high school in Agatti. With neither the team landing permit nor Krish's solo landing permit on hand, it took some frantic phone calls at the very last hour and lot of running around by our Man—Sameer—and frantic trips to Kavaratti (the Capital) to get the permits arranged. Krish needed the solo permit just to enter the island to meet the officials. Krish was waiting at the Kochi airport check-in counter with his mobile phone in one hand and laptop in the other, refreshing his mailbox when the permit was finally received by him. He showed the email (PDF attachment) to the airline staff at the counter and only then was he given his boarding pass! If ever there was a moment of nail-biting nervousness, this was it. While on the transit shuttle from the gate to board the flight, Krish received a call from Sameer that the island authorities were discussing the possibility of limiting days for the permit from that originally requested. In the interim, VU2PAI made some phone calls to crank up the political machinery in New Delhi. In the end, it all worked out. The entire team had been watching their cell-phones waiting anxiously for the phone call from Krish. A loud collective sigh of relief was given by everyone when Krish texted to say that he was heading to board the aircraft and the permit had been granted for everyone.

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Lucky to have a crane on the jetty that was used to unload the cargo that came by the wooden boat or else it would have been a challenge to unload that truck full of gear off the boat at 10 feet away from the jetty with water in between.

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A less pleasant surprise awaited Krish upon landing in Agatti. The boat with all our equipment had not left Mangalore due to bad weather and the next departure window was not until the following day. This was subject to the weather. The boat and equipment had been scheduled to reach Agatti on the day of Krish's arrival, but now Krish was on the island, with only a single transceiver in his checked baggage, and the large team joining in the next few days. So here was a much-awaited expedition waiting to start, but with no sight of the ship and its precious cargo. Thankfully, the weather improved and the ship was able to set sail the following day on its overnight journey to Lakshadweep. Meanwhile, Krish went QRV with a TS-480 and an NA4RR designed Hex Beam running 400w from a KPA 500 amplifier.

You are LOUD!

The next 2 days were devoted to meeting officials, giving a talk on radio at the local high school, and working on the antenna assembly. The team had discussed various antenna configurations and there was a consensus that using phased verticals would be a good thing. While Krish and Pai had used a Butternut vertical installed right in the salt-water with fantastic results, the same line of reasoning prevailed though it was untested. This meant some real back-breaking work in the hot sun while installing the Spiderpoles (*thank you Spiderbeam!*) in the sea. Chandra VU2RCT had fabricated custom supports for the Spiderpoles that could accommodate the 12m and 18m poles in the soft sand. Phasing boxes procured from DX Engineering (Comtek PVS-4) provided the phasing for one half of the original 4-square design.

The antenna field looked like this - a top loaded vertical for 160m with 4 capacitance hats, 2 element phased arrays for 80, 40 and 30m. All verticals had 4-8 radials with the elements perpendicular to the waterline, the inner-most element mounted at the wet edge of the high-tide mark. For 20m and up, we had two Butternut verticals, a 5-band Spiderbeam, a 2 element SteppIR and the NA4RR Hexbeam.

Due to luggage constraints we had to swap a couple of Acom 1000s with the KPA500s and thankfully the decision turned out right. We still paid excess baggage, but it didn't pinch us too badly. The KPA 500



Installing the 80m vertical in 6+ ft of water.



Some of the team are obsessed with the colorful beach umbrella, so this picture had to find a place in the article, amidst a backdrop of the 40m and 80m phased arrays.

is a good expedition amplifier and the size is just right.

The magic antennas turned out to be the phased verticals installed over the salt-water. The verticals performed so amazingly well that we received great feedback on the quality of our signals. For example, there were stations in NA, which is the most difficult path from VU7—being polar either way on long path and short path—who copied us and worked us on 40 and 30m during their late mornings and early evenings. When Krish had flown back to NA after 10 days, he even managed to work VU7AG on 40m RTTY at 3pm local time (EST).

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There were lots of stations in Europe who double-checked with us if we were indeed where we claimed to be. They had never heard such loud signals on any band from this part of the world. It was hugely satisfying for us to know that we were being heard so well.

Of course, there are always humbling moments and what we gained in TX, was somewhat offset by our RX abilities. Our receive capability on the low-bands turned out to be practically nil with no success on the RX antennas we had brought along. Consequently, we were listening on the TX antennas and at times the QRN would be so high that we were 'alligators'. (The term "alligator" derives from the creature with a large mouth and no ears—Ed.) After a few good nights on Top Band, the 160m antenna showed very high-SWR which caused the amp to trip offline. It turned out that the radial plate/coax feedpoint, mounted on a small 8 ft tall mast, had sunk in the sand and at high tide, the feedpoint box was almost submerged. Attempts to raise the height didn't meet with much success and eventually we had to give up on our 160m operation with some 500-odd QSOs in the log. Maybe next time, we will go better prepared with a focus on low-



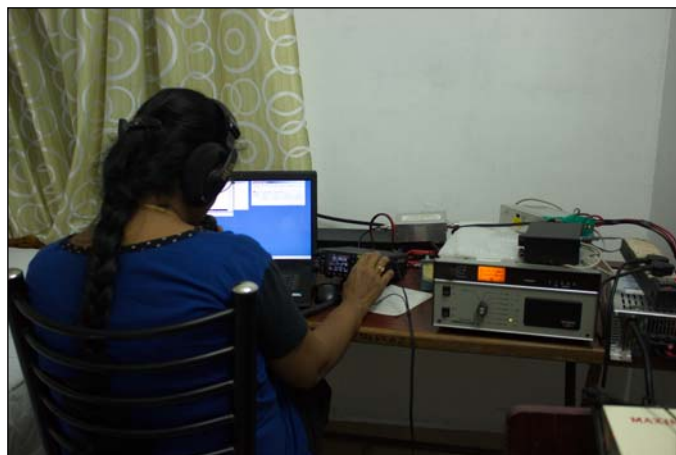
This was our 80 meter antenna when the tide was out.

bands and have a crew with at least one 160m expert!

Reflections

It is said that all is well that ends well and the same can be said of our operation. The operation evolved during its duration. The operating strategy was to hand out an all time new one, with the maximum demand being in NA, followed by maximizing the

QSO totals on 12 and 10m. Though the focus always remained working NA especially the West Coast, EU still managed the largest percentage of QSOs. JA and rest of Asia were under-served because the demand was largely from NA followed by EU and SA and rest of the world, in that order. The operation planning involved looking at statistics from past activations, gauging the demand and preparing the propagation prediction tables. Carl N4AA deserves a special mention for his untiring efforts in maintaining the DX Most Wanted List. He helped us with specific inputs based on the responses to the 2013 Survey. Although his survey was still not completed, he provided valuable insights which helped us plan better. The statistics available from Clublog are a very useful addition to those thinking about where to go for a



VU3CHM (Raji), on her maiden expedition, was the lone SSB voice on the air from VU7AG on Dec 9th/10th

next expedition. A big thank you to Carl and the team at Clublog.

The operating plan was revised after Krish returned back home based on the feedback from DXers. The team remained very receptive to feedback and adapted well to the change in plans to make the DX community happy. The flow of emails, comments on the 'ePilot' page supplemented by our fantastic team of pilots ensured the operation lived up to expectations of the majority. We are aware that demand is still not completely satisfied on the West Coast due to the brief openings we had and also on 80m/160m where many still need VU7. These are things learned, and the team hopes to do better whenever they plan to go to VU7 again in the future

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which may well be at the bottom of the sunspot cycle when low-band conditions will be better.

Concluding thoughts and acknowledgements

DXing and DXpeditioning are evolving and the change is for the better. We all agree that DXpeditioner's are performers and the world is our stage. Our callers are our audience and they judge us by our performance. We made a few people unhappy at the beginning of our operation, but things gradually fell in place and the unhappiness was replaced with some very glowing comments on our website and numerous emails. We learned that we must be open to the demands of our audience, even if it means a change in strategy. Being interactive through social media or in our case, the website with an e-pilot, meant the audience felt it was a part of the performance.



Front: VU3DMP, VU2PAI; Rear VU2ABS, VU2CDP

Aside from that, the influx of new technologies makes DX chasing a lot easier than it used to be. Skimmers, code readers, pan-adapters et al. make finding and working DX a whole lot easier. The evolution has happened at the audience end but life hasn't changed much at the business end of the DX. DXpeditions are still working pileups the same way as they did 50 years ago, except that now pileups have not only got fiercer but the pace is frantic as well. QSO rates of 200+ per hour are now a norm rather than the exception. The only evolution which

DXpeditioners have experienced is perhaps in their own skills, and purists will say that is how it ought to be!

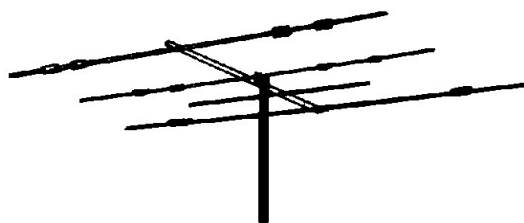
Like any successful endeavor, we had more than a few behind the scenes heroes who we want to acknowledge here. We had a great team of pilots – Mark N1UK for NA East Coast, Rich KY6R for NA West Coast, Luc LU1FAM for Central and South America, Gary DF2RG for Europe and Stan KH6CG who effectively handled the Rest of the World. We are grateful to our pilots for their patience when dealing with some unhappy members of the audience. Preparation for our endeavor took many months and the team relied on the experience and guidance of Prasad VU2PTT and also the technical support received from Murthy VU2MTT and Sri KJ4DAQ, Krish's neighbor in Cary NC, who helped build the radial plate/coax feedpoint out of material from Home Depot. These plates were used with great success on our phased verticals. We are also very grateful to our numerous sponsors who helped defray the expenses and also thanks go to the equipment suppliers for the very reliable hardware that made all those VU7AG contacts possible.

We would especially like to thank INDEXA for their continued support which makes DXPeditions like ours, possible. Some of our team signed up for INDEXA as individual members and have promised to continue supporting INDEXA's efforts by keeping their membership current.

Thank you once again and best DX to all of you!

73 from the VU7AG team,

Deepak, VU2CDP (Co-leader VU7AG)



Recent Events and Sightings



At SEDCO/W4DXCC in late September, 2014, INDEXA Officers Gary Dixon (K4MQG), John Scott (K8YC), and Dick Williams (W3OA), present a check to Krish Kanakasapapathi (W4VKU) to support Krish's DXpedition to Nicobar and Andaman Islands. VU4CB (Nicobar) is operating in early November and VU4KV is expected to become QRV on November 16. See www.vu4kv.info



INDEXA Treasurer Dick Williams (W3OA) presents a check to K1N team representative Lou Dietrich to become the first Club and Organization Sponsor of the January 2015 DXpedition to Navassa. Excitement is running high amongst Radio Amateur DXers that Navassa will be on the air for the first time in many years. See <http://www.navassadx.com/>

It Seems to Me. . . .

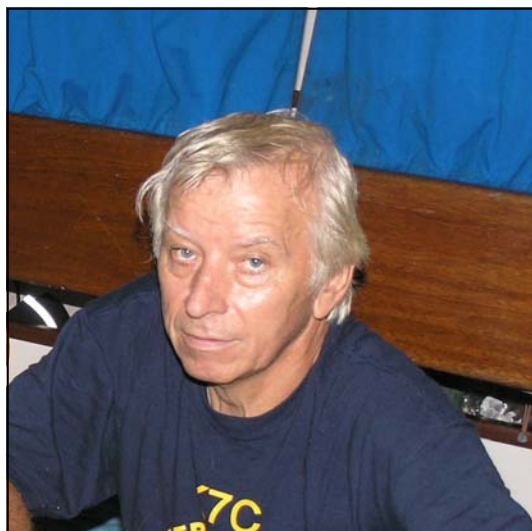
Back in 1973, Bob Metcalfe, working at Xerox PARC (Palo Alto Research Center) developed Ethernet. See [Wikipedia](http://en.wikipedia.org/wiki/Ethernet).) The simple beauty of Ethernet was the use of a shared medium and a protocol called CSMA/CD (carrier sense multiple access/collision detection). In CSMA/CD, the enabling terminal apparatus looks for collisions of data packets on the shared medium and initiates a randomized time interval between retries for each device vying for "space" in the spectrum of the medium. Simple. Effective. This same technique is used in terminal node controllers (TNC) for packet radio using Amateur Radio AX.25 protocol to avoid garbled transmissions due to packet collisions. Our "medium" in packet radio is the shared packet frequency rather than a coaxial cable or a wire.

If only two stations are talking to one another, collisions using CSMA/CD are almost non-existent because the "conversation" is essentially point-to-point simplex and parties to the communication each know when to "speak". But, when many stations are vying for connectivity on the same medium, the net throughput suffers or even ceases when collisions become a significant percentage of the total link traffic. Does this have some parallelisms to ham radio???

It seems to me that RTTY operators—particularly those trying to work a RTTY DX station—have not learned the lessons of the impact of collisions. When two or more RTTY signals are commingled, the result on a computer screen is nothing but a garbled morass of characters. Therefore, attempting to work a DX station with a pileup on his calling frequency results in NO communication for ANYONE. When using CW or SSB in simplex mode our human brains can "decode" the message, but the quad core, 2.6GHz CPU on my personal computer doesn't have the "smarts" to do that. So, let's pass the word to all RTTY operators on the importance of "looking" at their computer screens to see if the RTTY DX operator is doing his "looking" for a signal up or down from his calling frequency. By operating "split" the DX station will surely see the collisions of those calling in the pileup while "looking" away from his listening frequency, but at least the pileup, listening on a clear frequency, will know what the DX station is communicating. So while the mantra "Listen, Listen, and Listen" still holds for CW and SSB, the operative mantra of RTTY DXing is, "Look, Look, and Look." Pass it along!!

--The Editor

Meet INDEXA Director Franz Langner, DJ9ZB



My interest in radio goes back to 1962 when I discovered ham radio by listening to 40m AM stations on an old broadcast receiver, and then I found the way to the DARC (The German Amateur Radio Club, akin to ARRL). I started SWLing and built my own OV2 receiver. I participated in the 1st DARC licensing seminar in Benediktbeuren and was licensed in November 1964 as DJ9ZB. I started my first activity on the HF bands and contests in 1966. I became QSL-manager for many Arab stations. My first time of "being DX" was in May 1975 as 4W1ZB from Sana'a, Yemen Arab Republic and JY8ZB from Amman, Jordan. We organized OE6XG/A DXpedition to Abu Ail Islands in the Red Sea, and after the successful DXpedition we met His Majesty King Hussein, JY1, in Amman.

My early interest in amateur radio led to my studies of electro/electronics and I worked for LITTON Industries/

Northrop Grumman Company in Freiburg for 41 years.

DX activities and DXpedition prefixes are:

4W1, JY, TA, C5, OE/A, EA8, SV5, J2Ø, J20/A, 3A, FM, FG, T7, HBØ, HVØ, HV5Ø, C31, VK9Z, PYØ, PYØF, PYØS, KHØ, XE1, FOØX, STØ, ET, OM9, LY3, ES1, E31, E3ØG, 9E2, PJ7, TX9, HSØ, TP2, TP8, 7O, 3XA8, J5, 6O, 5U, XRØX, 3CØ, 9X, 9U, TN, KH7K, KH4, XZ, CU4, 1AØKM, HSØ, KDØRXY. I am pleased to say I was a member of DXpeditions of the Year to Midway Island (K4M, 2009) and Malpelo Island (HKØNA, 2012)

I am a member or honorary member of over 25 DX Foundations or clubs. I act as the QSL manager for more than 120 stations, and I am a member of the QSL Manager Society. I am honored to have been awarded the following honors recognizing my role in amateur radio:

- o CQ DX HALL of FAME (09. May 1982)
- o DX Hall of Fame by Rhein Rhur DX Association—RRDXA—2011
- o DX Hall of Fame by Araucaria DX Group Brazil—2012

I have authored a number of articles and books on ham radio. The one most recognized by many outside Germany is the DX World Guide, published in its 3rd Edition by CQ Communications in 2012.

My home is a small city in the SW of Germany, near the French border, running a Yaesu FT1000MP, Alpha 91ß Linear, Mosley CL33 Classic, WARC 4-Element CREATE Beam, CL6 50 MHz Beam, Dipoles

--73, Franz Langner

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